

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims in the above-referenced application:

1 1.-10. (Canceled)

1 11. (Currently amended) A rapid diagnostic test system, comprising:
2 a single-use module including[;]

3 a test strip having a test stripe, a control stripe, and a receiving zone,
4 the test strip being capable of generating a single response at the test stripe and the
5 control stripe subsequent to contact of a sample fluid in the receiving zone, the test
6 stripe ~~a medium~~ containing a labeling substance that comprises first persistent
7 fluorescent structures that emit light having a first frequency and second persistent
8 fluorescent structures that emit light having a second frequency, wherein each of the
9 first persistent fluorescent structures is attached to a substance capable of binding the
10 first persistent fluorescent structure to a target analyte ~~when~~ after a sample fluid
11 containing the target analyte is applied to the ~~medium~~ receiving zone;

12 a light source positioned to illuminate a target area and a control area
13 on the medium;

14 a first photodetector positioned to measure light of the first frequency
15 originating from the target area of the medium;

16 a second photodetector positioned to measure light of the second
17 frequency originating from the control area, wherein a signal from the second
18 photodetector indicating an intensity above a threshold level indicates that the sample
19 has passed through the target area; and

20 ~~a terminal located on an external surface of the single-use module for~~
21 ~~receiving electrical power from a source external to the single-use module for the~~
22 ~~light source, the first photodetector, and the second photodetector, the terminal~~
23 ~~comprising conductors along the external surface of the single-use module, the~~
24 ~~terminal of the single-use module configured to be inserted into a receptacle of a~~
25 ~~reusable module for providing the electrical power from the reusable module to the~~

26 ~~single-use module and communicating test result signals between the single-use~~
27 ~~module and the reusable module~~
28 an optical system positioned in a light path between the light source
29 and at least one of the first and second photodetectors, the optical system arranged to
30 modify incident light from one of the control area and the target area.

1 12. (Previously presented) The system of claim 11, wherein the
2 reusable module implements a user interface capable of indicating a test result.

1 13. - 20. (Canceled)

1 21. (Previously presented) The system of claim 12, wherein the user
2 interface comprises a display for the test result.

1 22. (Previously presented) The system of claim 11, wherein the test
2 signals are electrical test signals.

1 23. (Previously presented) The system of claim 11, wherein the first
2 and the second persistent fluorescent structures comprise quantum dots.

1 24. (Canceled)

1 25. (Canceled)

1 26. (Previously presented) The system of claim 11, wherein the medium
2 comprises a lateral-flow strip for performing a binding assay, and the target area
3 contains an immobilized substance that binds to and holds a complex including one of
4 the first persistent fluorescent structures and the target analyte.

1 27. - 38. (Canceled)

1 39. (Previously presented) The system of claim 26, wherein the second
2 persistent fluorescent structures bind to the control area.

1 40. (Previously presented) The system of claim 11, further comprising:
2 a first color filter that transmit light of the first frequency to the first
3 photodetector and blocks other frequencies; and
4 a second color filter that transmit light of the second frequency to the second
5 photodetector and blocks other frequencies.

1 41. (Previously presented) The system of claim 11, wherein the control
2 area contains an immobilized substance that binds and retains to the labeling
3 substance.

1 42. (New) The system of claim 11, wherein the optical system
2 comprises a lens.

1 43. (New) The system of claim 11, wherein the optical system
2 comprises a chromatic prism.

1 44. (New) The system of claim 11, wherein the optical system
2 comprises a thin-film filter.

1 45. (New) The system of claim 11, wherein the optical system
2 comprises a diffractive grating.